

Report on work completed on claim TB4215323  
Missing Link – South Rickaby Property  
November, 2010

*Prepared by*  
**R. Therriault, M.Sc. on behalf of Sage Gold Inc.**

*Prepared for*  
**The Ministry of Northern Development and Mines  
3<sup>rd</sup> Floor, 933 Ramsey Lake Road  
Sudbury, Ontario  
P3E-6B5  
T: 1 -888-415-9845**

November 10, 2010

Toronto, Ontario

# Table of Contents

<b>Text</b>	<b>Page</b>
Location & Access .....	1
History .....	1
Geology and Mineralization.....	3
2010 Exploration Program .....	5
Interpretations and Recommendations .....	9
References .....	9
Qualifications .....	11

## **Figures**

<b>Figure 1:</b> Property Location and Claims Distribution.....	2
<b>Figure 3:</b> Regional Geology .....	6
<b>Figure 4:</b> Location of 2010 Work .....	7
<b>Figure 5:</b> 2010 Stripping Geology and Channel Sample Results.....	8

## **Tables**

<b>Table 1:</b> Channel Sample Results.....	9
---	---

## **Appendices**

<b>Appendix A:</b> 2010 ALS Chemex Certificates .....	AT END
<b>Appendix B:</b> 2010 ALS Chemex Invoices.....	AT END
<b>Appendix C:</b> 2010 ThorCox Invoices.....	AT END

## *Location & Access*

The Missing Link property is located approximately 200 km northeast of the city of Thunder Bay, Ontario and 10 km northeast of Jellicoe in the Thunder Bay Mining Division (Figure 1). It is situated 6 km north of Highway 11 bordering the Kinghorn Road in Lapierre and Legault Townships of NTS 42E/11&14.

Access to the property is gained via Highway 11 and Kinghorn Road. Access on the property is made possible by old and new logging roads, which run east and west of the Kinghorn road. Recent logging has facilitated easy access to the claim worked in 2010.

## *History*

The following history of the Missing Link claims relies in part on Mclvor (1990).

1930's (?): Old trenches on the property indicate previous work by an unknown company (Mclvor, 1990).

1986: Several trenches and pits discovered north of Jory Lake exposing a zones of shearing and carbonate-sericite-silica alteration in mafic metavolcanic rocks. Assays from the sheared material yielded 2.6 g/t Au while a sample from a thin quartz-arsenopyrite vein returned 17.8 g/t Au (Mclvor, 1990). The property was optioned by Golden Earth Resources.

1987: Golden Earth Resources completed an airborne magnetic and VLF-EM survey over the property. Two east-west trending magnetic lows were delineated in the southern part of the property and interpreted as zones of carbonitization within the mafic metavolcanic rocks. Two magnetic highs were also identified and interpreted as zones of magnetite enrichment in the mafic metavolcanic rocks. Ground magnetic and VLF-EM surveys were completed over all the lakes on the property. The resulting VLF-EM anomalies were attributed to conductive lake sediments (Terraquest Ltd., 1987).

1989: Minimal power stripping and trenching along strike from the original discovery trenches. Homestake Mineral Development Company (Homestake) optioned the property in December of 1989 (Mclvor, 1990).

1990: Homestake completed an integrated exploration program involving: 1) cutting a 72 line km grid over the entire property; 2) 1:2000 scale geological mapping over the entire property and collection of rock samples for assay; 3) completion of a 66 line km survey of total field magnetic and VLF-EM over the property; 4) 121 hours of power stripping in eight areas on the property and 11 days of Wajax pump outcrop washing; 5) detailed 1:100 mapping and channel sampling of stripped areas with analyses of 325 rock samples for Au content. The best assay result was a 3.0 m channel sample over a quartz carbonate stockwork zone that contained 1.22 g/t Au including 2.06 g/t Au over 1.0 m. Details of this exploration program can be found in Mclvor (1990).

1991: Placer Dome drilled 5 holes on the northwest side of Jory Lake. No significant Au assay results were returned (Laderoute, 1991).

1993: Mechanical stripping, sampling and mapping were completed on the western part of the property by M. Nelson and others. Although severely sheared and altered rocks were encountered, no significant gold values were obtained during the program (Nelson, 1993).

1994: A trenching and stripping program was completed by N. Cox on the western part of the property. Poor but anomalous gold results were obtained despite the presence of significant shearing, alteration and sulphidization (Cox, 1994).

## *Geology & Mineralization*

### **Regional Geology**

The following text has been summarized from Lafrance *et al.* (2004) and references therein. Figure 2 illustrates the regional geology surrounding the Missing Link claims while the geology on and adjacent to Missing Link is discussed later in the report.

The Beardmore Geraldton Belt (BGB) is a 30 km wide and 180 km long belt composed of alternating slices of tectonically transposed metavolcanic and metasedimentary rocks. The belt has been interpreted as a transitional terrane between the granite-greenstones of the Onaman-Tashota belt to the north and the Quetico metasedimentary subprovince to the south.

The BGB has been subdivided into six shear-bounded lithological units (Lafrance *et al.*, 2004). Three of these are metasedimentary units (Northern, Central and Southern Sedimentary Units (NSU, CSU and SSU)) while the remaining three are metavolcanic packages (Northern, Central and Southern Volcanic Units (NVU, CVU and SVU)). Each of these sub-belts has an approximate east-west strike, is steeply dipping and has been metamorphosed to greenschist facies.

The mafic rocks of the three volcanic units differ significantly in volcanology and tectonic setting. Rocks of the SVU consist of strongly deformed north topping massive to pillowed basalts and andesites interlayered with thin sedimentary and volcanoclastic units with a reported “within-plate” geochemical affinity (Shanks, 1993; Tomlinson *et al.*, 1996). In contrast, the CVU contains a greater proportion of pyroclastic rocks and strongly amygdaloidal flows suggestive of shallow water or subaerial volcanism (Kresz and Zayachivsky, 1991). The majority of the rocks in the belt are andesitic to dacitic in composition with a calc-alkaline affinity. Rocks of the NVU consist of massive and pillowed amygdaloidal basalts and andesites with a tholeiitic chemistry (Tomlinson *et al.*, 1996). Chemical metasedimentary rocks, including iron formation, can be found in all three mafic belts. The beds are typically 1 – 2 m wide with strike lengths ranging from 100 m to 1 km.

The three sedimentary packages consist predominately of clastic rocks with subordinate chemical metasedimentary rock units. The NSU is a 300 – 800 m thick package dominated by polymictic

conglomerate and sandstone (Mackasey, 1975; Mackasey *et al.*, 1976). The clasts range in size from pebble to boulder and consist of granitoids, mafic and felsic volcanics, jasper and vein quartz. Rocks of the CSU are thought to be transitional between the NSU and SSU. The 2 km thick sub-belt consists of feldspathic sandstone, siltstone, argillite and iron formation all overlain by a polymictic conglomerate (Lafrance *et al.*, 2004). The 3 – 10 km SSU consists of bedded feldspathic sandstone interlayered with polymictic conglomerate, siltstone and argillite. Oxide-facies dominant iron formation is a minor component of the SSU, but is present as magnetite-hematite-jasper units ranging in thickness from 3 – 30 m.

## **Property Geology**

Detailed mapping of the Missing Link claims has been completed by the Homestake Mineral Development Company in 1990 (McIvor, 1990). Below is a brief description of their findings. The reader is referred to their report for details.

### Lithologies

*Andesite (1A):* Massive to weakly foliated light green aphanitic rock best exposed in the southwest part of the property. Several areas suggest this unit grades laterally into diorite.

*Basalt (1B):* Observed in the southern part of the property as moderately foliated weakly to moderately chloritized usually aphanitic rock. Coarser areas contain visible feldspars and grades into *basalt-gabbro*. Severely stretched pillows are rarely observed.

*Basalt-Gabbro (1C):* A coarser grained equivalent of the basalt that is typically interlayered with the basalt. The unit is moderately foliated and chloritized with variable sausseritization of the plagioclase.

*Magnetite-Bearing Basalt (1D):* Occurs as thin bands paralleling stratigraphy in the southern part of the property. The unit is generally black, aphanitic and fissile with 5-10% fine grained magnetite. The unit shows a strong magnetic signature and provides good stratigraphic control in the southern part of the property.

*Intermediate Quartz Eye Tuff (2B):* A rare unit consisting of thin beds containing an aphanitic andesite matrix with 5-15% stretched quartz eyes. The unit is concordant with stratigraphy suggesting it is an interflow tuff.

*Oxide Facies Iron Formation (2C):* This unit is inferred based on east-west trending magnetic and VLF-EM anomalies. The three parallel anomalies occur in the central part of the property and are typical of either massive pyrrhotite exhalative interflow or sulphidized oxide facies iron formation.

*Pyritic/graphitic interflow (2D):* This unit is inferred based on an east-west trending VLF-EM anomaly and the discovery of massive pyrite float in some of the trenches on the property. A strong east-west VLF-EM conductor with no associated magnetic response occurs along Homestake's baseline (McIvor, 1990) while immediately south several large boulders of massive pyrite have been discovered.

*Polymictic Paraconglomerate (3A):* This unit occurs sporadically south of Jory Lake. It is composed of a poorly sorted greywacke matrix with 40% quartz, chert and diorite clasts. The northern contact with the metavolcanics was not observed, but has been inferred to cross the central portion of Jory Lake based on airborne magnetic data. The contact trends approximately 080°.

*Chlorite-Sericite-Fe Carbonate Schist (4A):* At least three zones of intense shearing and alteration occur on the property cutting the mafic metavolcanic rocks. The shears show sharp boundaries and are 1 – 2 m wide trending 075° to 090°. S-kinks and north-south extension fractures are common. Sericite-carbonate forms zones of near-pervasive alteration while quartz and quartz-carbonate veins crosscut or are sheared/boudinaged/brecciated/rotated by the shear zones. The three shear zones are interpreted as anastomosing subshears related to the larger Paint Lake Shear system.

*Diorite-Gabbro (5):* Diorite-gabbro is found in the east central part of the property forming a prominent ridge. The unit forms two coarse sills conformable with stratigraphy. It is medium grained, non magnetic and weakly foliated.

*Diabase (6):* Thin (~1 m) strongly magnetic porphyritic diabase dykes cut all units on the property. They trend approximately north-south.

### Structure

The eastern extension of the Paint Lake Shear is inferred to trend east-west toward the southern boundary of the eastern claims. The fault separates the NSU to the south from the Onaman-Tashota belt to the north.

A pervasive fabric is developed throughout the mafic metavolcanic rocks on the eastern block. The fabric parallels stratigraphy trending approximately 085° dipping steeply to the south at 075° – 085°. Small scale S-folds and north-south trending extensional fractures suggest the area is situated on a fold limb, although the direction of closure is not known.

Numerous 030° trending sinistral cross faults transpose stratigraphy by 1 – 5 m on the property. McIvor (1990) suggests these are related to antithetic slip along the broader and regional dextral Paint Lake Shear system.

## *2010 Exploration Program*

### **Stripping and Channel Sampling**

A short stripping program was carried out by ThorCox Excavating Ltd. of Beardmore, Ontario between September 9-13, 2010. The stripping was completed with a 215 and 320 Cat Excavator operated by Ted Cox of Beardmore. Sampling (channel) was completed by L. Holt and M. Nelson of Beardmore. Mapping was completed by R. Therriault (Kakabeka Falls, Ontario). Figure 4 below illustrates the geology of the only stripping that was possible to map/channel sample. Other attempts at stripping during the

program resulted in immediate water infiltration before bedrock was reached, and so sampling/mapping was not possible.

Assay results from the channel sampling are shown below in Table 1. Although significant amounts of sulphides were present, no significant gold values were returned. All ICP results for these samples can be found in Appendix A.

Sample Number	Easting	Northing	Channel Number	Sample length (m)	Comments	Au (g/t)
10LHML0172	465839	5510669	122	1	Si-chl-carb shear	0.01
10LHML0173	465838	5510668	123	1	Si-chl-carb shear	0.01
10LHML0174	465838	5510668	123	0.7	Si-chl-carb shear	<0.01
10LHML0175	465838	5510671	124	0.5	Si-chl-carb shear	0.01
10LHML0176	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0177	465838	5510671	124	0.5	Veins of massive fine py, minor cpy, Si-chl-carb shear	0.01
10LHML0178	465838	5510671	124	0.5	Veins of massive fine py, minor cpy, Si-chl-carb shear	<0.01
10LHML0179	465835	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0180	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0181	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0182	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0183	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0184	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0185	465838	5510671	124	0.5	Si-chl-carb shear	<0.01
10LHML0186	465838	5510676	125	0.5	Si-chl-carb shear	<0.01
10LHML0187	465838	5510676	125	0.75	Si-chl-carb shear	<0.01

**Table 1:** Assay results from channel samples, Missing Link 2010 stripping program.

### *Interpretations and Recommendations*

Although the channel sampling program did not yield anomalous gold results, recent logging has increased the amount of bedrock exposure in this area of the property. A sheared and mineralized quartz-feldspar porphyry was noted to the west of the stripped area at/toward the southern contact of a magnetic basalt. Additional prospecting should be completed in this area and over the entire cut block. Pending the results of this program, additional stripping can be completed.

### *References*

- Cox, N. 1994. Missing Link project, Lapierre Township, Beardmore-Jellicoe-Geraldton area, Thunder Bay Mining Division. AFRI #42E14SW0035.
- Laderoute, D. 1991. Placer Dome Inc., Project 466 (Missing Link Option), Report on the diamond drilling program, Lapierre and Legault Townships, Ontario. AFRI #42E14SW0003.
- McIvor, D. 1990: The results of an integrated exploration program (geological mapping, lithogeochemical sampling, ground geophysics and power stripping/trenching) on the Missing Link

Property (claims TB907550 et al) Lapierre and Legault Townships, Thunder Bay Mining Division, Ontario. AFRI #42E14SW001.

Lafrance, B., DeWolfe, J., Stott, G. 2004: A structural reappraisal of the Beardmore-Geraldton belt at the southern boundary of the Wabigoon subprovince, Ontario, and implications for gold mineralization.

Mackasey, W.O. 1975: Geology of Dorothea, Sandra, and Irwin Townships, District of Thunder Bay. Ontario Division of Mines, Geological Report 122.

Mackasey, W.O., Edwards, G.R. and Cape, D.F. 1976: Legault Township, District of Thunder Bay. Ontario Division of Mines, Preliminary Map P-1191, scale 1:15 840.

McIvor, D. 1990: The results of an integrated exploration program (geological mapping, lithogeochemical sampling, ground geophysics and power stripping/trenching) on the Missing Link Property (claims TB907550 et al) Lapierre and Legault Townships, Thunder Bay Mining Division, Ontario. AFRI # 42E14SW001.

Nelson, M. 1993. Legault Township Project (Missing Link Extension), 17 claim group, Thunder Bay Mining Division, Prospecting and trenching program. AFRI #42E14SW0047.

Shanks, W.S. 1993: Geology of Eva and Summer Townships, District of Thunder Bay, Ontario Geological Survey, Open File Report 5821.

Terraquest Ltd. 1987. Report on an airborne magnetic and VLF-EM survey: i) Barbara and Meader Townships; ii) Lapierre and Legault Townships, Thunder Bay Mining Division, Ontario. *Prepared for:* Golden Earth Resources Inc. AFRI #42E14SW0010.

Tomlinson, K.Y., Hall, R.P., Hughes, D.J. and Thurston, P.C. 1996: Geochemistry and assemblage accretion of metavolcanic rocks in the Beardmore-Geraldton greenstone belt, Superior Province. Canadian Journal of Earth Sciences, **33**: 1520-1533.

Kresz, D.U. and Zayachivsky, B. 1991: Precambrian Geology, northern Long Lac area. Ontario Geological Survey. Report 273.

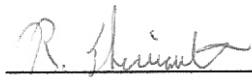


## *Qualifications*

I, Ronnie Therriault, of #32 Hwy 595, Kakabeka Falls Ontario, do hereby certify that:

- 1) I am a consulting geologist with Sage Gold Inc. with an office at 365 Bay Street, Suite 500, Toronto Ontario, M5H-2V1
- 2) I am a graduate of The University of Western Ontario with a B.Sc. and in 2006 with an M.Sc., both in Geology.
- 3) I have practiced my profession continuously since 2006.
- 4) I am responsible for, or directly supervised, the writing of this report dated September 25, 2010. It is based on a study of the data and literature available on the Missing Link property.
- 5) As of the date of this certificate, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed to make the report not misleading.

Dated this 25<sup>th</sup> day of September, 2010



---

Ronnie Therriault, M.Sc.

Kakabeka Falls, Ontario